



High-Pressure Foam Rocket

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TOOLS:

- [Hot glue gun \(1\)](#)
- [Scissors \(1\)](#)

PARTS:

- [Foam pipe insulation \(1\)](#)
You can build 8 rockets with a 6' piece (instructions here are for one rocket).
- [Foam sheet \(1\)](#)
available at craft stores or online
- [Zip tie \(1\)](#)
- [Duct tape \(1\)](#)
Fun colors are now available.
- [Packing tape \(1\)](#)

SUMMARY

Calling a rocket that sprints over 100 feet into the air a “toy” might be a bit of a stretch. Toy or not, this rocket really packs a punch. Fly it using the [Compressed Air Rocket launcher](#) from MAKE Volume 15 (get the kit at makezine.com/go/launcherkit) or a stomp rocket launcher (makezine.com/go/stomplauncher).

Step 1 — Cut the foam and cinch with a zip tie.



- Cut a 9" section of foam pipe insulation. Wrap the zip tie 1/2" from one end and cinch it tight so no air will escape. Trim the excess foam above the cinched-off end.

Step 2 — Apply duct tape to foam rocket body.



- Criss-cross 2 pieces of duct tape over the cinched end. Now cover the entire foam section with duct tape spanning the length. Three overlapping pieces of tape should do the trick.

Step 3 — Cut and attach foam fins.



- Cut a 4"×1½" rectangle from the foam sheet, then cut it diagonally to make 2 fins. Repeat. Using generous amounts of hot glue, attach 3 of the fins, spaced evenly, onto the foam rocket body tube. If the glue doesn't stick well to the rough duct tape, wrap 2 strips of clear packing tape over the duct tape around the bottom of the rocket to create a smooth surface for gluing the fins.

Step 4 — Use it!



- Pressurize the compressed air launcher for 45psi–65psi, and launch. (For a lower pressure/altitude launch, use a stomp launcher.) When the duct tape finally fails with a spectacular blowout, just apply more duct tape over the blown section and keep flying!

This project first appeared in [MAKE Volume 29](#), page 123.

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